

Concrete Masonry Unit Samples 29 & 30

Please Note:

- The CMU specimens are contained in a total of four boxes.
 - Two boxes for Sample 29 and two boxes for Sample 30.
 - DO NOT mix samples. Each unit is labeled, and the units for Sample 30 have a paint strip on one end.
- Please allow until July 30th for receipt of samples.
- Compressive strength specimens should be tested on August 27, 2010.
- Closing date for test results is September 3, 2010
- **IMPORTANT!! Data Entry Confirmation** - After you successfully submit test results on the CCRL website:
 - You will receive a confirmation screen.
 - You will receive a confirmation email sent to the email provided on the data entry page.
 - Sign out and sign in again, visit the Data Entry page to review and confirm your test results. If the Data Entry page is blank CCRL did NOT receive your test results.
 - **Print and keep** the confirmation email and screen as proof your data was submitted.
- If you did not receive data entry confirmation visit ["Trouble Data Entry Trouble Shooting"](#) or contact CCRL at 301-975-6704.



July 13, 2010

TO: Participants in the CCRL Concrete Masonry Units Proficiency Sample Program

SUBJECT: Concrete Masonry Units Samples No. 29 and No. 30

The current pair of Concrete Masonry Units Proficiency Samples were sent by way of Federal Express Ground on July 13, 2010. Please allow until July 31, 2009 for receipt of these samples. If these samples have not been received on this date or if the samples you receive are damages, notify us by calling 301-975-6704. There are six units for each sample. Each sample is packaged in two separate boxes each containing three units. These boxes are labeled on the outside as to which sample they contain. Sample No. 30 has a paint strip on one end to aid in specimen identification. **An effort is made to label each specimen during packaging. However, laboratory personnel must make sure specimens are identified before removal from its box.** The two samples were produced using different concrete proportions and must not be mixed.

Tests are to be conducted separately on each sample. Read the enclosed instructions before proceeding with any testing. It is mandatory that these instructions and ASTM standard C140-08a be followed. These tests should be conducted as soon as possible after the samples are received, and the test results should be promptly reported to CCRL upon completion of testing. Test results should be entered at our website: <http://www.ccrl.us/>. **Note: Compressive strength specimens should be tested on or about August 27, 2010.** The closing date for submitting test results is September 3, 2010.

Additional samples of this sample pair and past CCRL samples are available for sale. These samples can be used for research, technician training, and test equipment verification. Contact us for availability and pricing.

Sincerely,

Robin K. Haupt
Supervisor CCRL Proficiency Sample Program
Cement and Concrete Reference Laboratory

CEMENT AND CONCRETE REFERENCE LABORATORY
CONCRETE MASONRY UNITS PROFICIENCY SAMPLE PROGRAM
Samples No. 29 and No. 30

Instructions

INSTRUCTIONS FOR TESTING

- 1 CCRL Concrete Masonry Units Proficiency Samples Number 29 and Number 30 were distributed July 13, 2010. You should receive four boxes, with each box containing three 4x8x8" concrete masonry units. These specimens were manufactured to comply with ASTM C90 Loadbearing Concrete Masonry Units. Please allow two weeks for receipt of these samples. **If you have not received four boxes by July 30, 2010**, please notify CCRL Proficiency Sample Program, phone 301-975-6704.
- 2 Each box should be labeled as Sample No. 29 or Sample No. 30. When packaged each specimen was also identified with small labels. In addition to the sample number these labels also contain additional information used during packaging and have no other significance. **Each specimen should be checked for proper labeling with its identity before removal from its box.** In addition, Sample No. 30 has a paint strip on one end to aid in specimen identification. The two samples are produced using different concrete proportions and **must not be mixed.**
- 3 Verify that you have received a total of 12 units, six units of Sample No. 29 and six of Sample No. 30, and that they are in good condition. Notify CCRL of any damaged or missing samples.
- 4 Immediately after receiving and unpacking the units, determine and record the received weight (W_r) for each unit.
- 5 For each sample divide the six units into two groups of three units so that the average received weight (W_r) of each group of three is approximately equal. The first group of three units (units #1, #2, #3), referred to as "Compression Units" on the reporting form, will be used for compressive strength testing. The second group (units #4, #5, #6), referred to as "Absorption Units" on the reporting forms, will be used for dimensional evaluation, and absorption testing by water immersion.
- 6 Perform all testing in accordance with ASTM Standard C 140-08a. A copy of this edition of the standard, may be obtained directly from ASTM, phone: 610-832-9585.
 - 6.1 Testing Compression Specimens: Test specimens on or about August 27. Note date tested on reporting form.
 - 6.2 Orientation of Specimens for Testing: Compressive strength specimens are to be tested with their cores in a vertical direction.
 - 6.3 Calculation of Area and Strength: Area of "Compression Units" shall be calculated as **net area**. Compressive strength shall be calculated using net area and reported as net area compressive strength.

INSTRUCTIONS FOR REPORTING

- 1 Report test results on the reporting forms provided, being sure to complete all three pages.
- 2 Test results must be reported in the units and to the nearest significant number indicated for each test on the reporting forms.
- 3 The closing date for test results is September 3, 2010.

**CCRL PROFICIENCY SAMPLE PROGRAM
CONCRETE MASONRY UNITS - SAMPLES NO. 29 & NO. 30**

RETURN TO: R. K. Haupt, Supervisor, PSP
Cement and Concrete Reference Laboratory
National Institute of Standards and Technology
100 Bureau Drive, Stop 8618
Gaithersburg, Maryland 20899-8618
FAX: 301-975-2243

FROM: _____

e-mail: _____

Test Results
Report Results as Indicated in ()

*Check here if name or
Address has changed* _____

COMPRESSION UNITS (units #1, #2, and #3)

Sample No. **Sample No.**
 29 30

		Sample 29	Sample 30
RECEIVED WEIGHT (W_r)	Unit 1	_____	_____
lb (nearest 0.1 lb)	Unit 2	_____	_____
	Unit 3	_____	_____

Average Received Weight (W_r), lb (nearest 0.1 lb) _____ [500]

		Sample 29	Sample 30
MAXIMUM COMPRESSIVE	Unit 1	_____	_____
LOAD (P_{max})	Unit 2	_____	_____
lb (nearest 10 lb)	Unit 3	_____	_____

See Instructions 6.1. Date compression specimens tested: _____

Average Maximum Compressive Load (P_{max}), lb (nearest 10 lb) _____ [550]

		Sample 29	Sample 30
NET AREA COMPRESSIVE	Unit 1	_____	_____
STRENGTH	Unit 2	_____	_____
psi (nearest 10 psi)	Unit 3	_____	_____

Average Net Area Compressive Strength, psi (nearest 10 psi) _____ [560]

Tests performed by _____ Date _____
Tests reported by _____ Title _____
Phone _____ FAX _____ CCRL laboratory number _____

**CCRL PROFICIENCY SAMPLE PROGRAM
CONCRETE MASONRY UNITS - SAMPLES NO. 29 & NO. 30**

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National Institute of Standards and Technology
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Test Results
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*Check here if name or
Address has changed* _____

ABSORPTION UNITS (units #4, #5, and #6)

		Sample No. 29	Sample No. 30	
	Sample 29	Sample 30		
RECEIVED WEIGHT (W_r)	Unit 4	_____	_____	
lb (nearest 0.1 lb)	Unit 5	_____	_____	
	Unit 6	_____	_____	
Average Received Weight (W_r), lb (nearest 0.1 lb)		_____	_____	[600]
	Sample 29	Sample 30		
WIDTH (W)	Unit 4	_____	_____	
inch (nearest 0.1 inch)	Unit 5	_____	_____	
	Unit 6	_____	_____	
Average Width (W), inch (nearest 0.1 inch)		_____	_____	[510]
	Sample 29	Sample 30		
HEIGHT (H)	Unit 4	_____	_____	
inch (nearest 0.1 inch)	Unit 5	_____	_____	
	Unit 6	_____	_____	
Average Height (H), inch (nearest 0.1 inch)		_____	_____	[520]
	Sample 29	Sample 30		
LENGTH (L)	Unit 4	_____	_____	
inch (nearest 0.1 inch)	Unit 5	_____	_____	
	Unit 6	_____	_____	
Average Length (L), inch (nearest 0.1 inch)		_____	_____	[530]
	Sample 29	Sample 30		
MINIMUM FACE SHELL THICKNESS (min. FST)	Unit 4	_____	_____	
inch (nearest 0.01 inch)	Unit 5	_____	_____	
	Unit 6	_____	_____	
Average Min. Face Shell Thickness (min. FST), inch (nearest 0.01 inch)		_____	_____	[532]
	Sample 29	Sample 30		
MINIMUM WEB THICKNESS (min. WT)	Unit 4	_____	_____	
inch (nearest 0.1 inch)	Unit 5	_____	_____	
	Unit 6	_____	_____	
Average Min. Web Thickness (min. WT), inch (nearest 0.1 inch)		_____	_____	[533]
	Sample 29	Sample 30		
IMMERSED WEIGHT (W_i)	Unit 4	_____	_____	
lb (nearest 0.1 lb)	Unit 5	_____	_____	
	Unit 6	_____	_____	
Average Immersed Weight (W_i), lb (nearest 0.1 lb)		_____	_____	[610]

Tests performed by _____ Date _____
Tests reported by _____ Title _____
Phone _____ FAX _____ CCRL laboratory number _____

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CONCRETE MASONRY UNITS - SAMPLES NO. 29 & NO. 30**

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Cement and Concrete Reference Laboratory
National Institute of Standards and Technology
100 Bureau Drive, Stop 8618
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Test Results
Report Results as Indicated in ()

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ABSORPTION UNITS (units #4, #5, and #6) - continued

Sample No.
29 30
Sample No.
29 30

	Sample 29	Sample 30	
SATURATED WEIGHT (W_s)	Unit 4 _____	_____	
lb (nearest 0.1 lb)	Unit 5 _____	_____	
	Unit 6 _____	_____	
Average Saturated (W_s), lb (nearest 0.1 lb)	_____	_____	[620]

	Sample 29	Sample 30	
OVEN-DRY WEIGHT (W_d)	Unit 4 _____	_____	
lb (nearest 0.1 lb)	Unit 5 _____	_____	
	Unit 6 _____	_____	
Average Oven-Dry Weight (W_d), lb (nearest 0.1 lb)	_____	_____	[630]

	Sample 29	Sample 30	
NET AREA (A_n)	Unit 4 _____	_____	
inch ² (nearest 0.1 inch ²)	Unit 5 _____	_____	
	Unit 6 _____	_____	
Average Net Area (A_n), inch ² (nearest 0.1 inch ²)	_____	_____	[635]

	Sample 29	Sample 30	
ABSORPTION	Unit 4 _____	_____	
lb/ft ³ (nearest 0.1 lb/ft ³)	Unit 5 _____	_____	
	Unit 6 _____	_____	
Average Absorption, lb/ft ³ (nearest 0.1 lb/ft ³)	_____	_____	[640]

	Sample 29	Sample 30	
DENSITY (D)	Unit 4 _____	_____	
lb/ft ³ (nearest 0.1 lb/ft ³)	Unit 5 _____	_____	
	Unit 6 _____	_____	
Average Density (D), lb/ft ³ (nearest 0.1 lb/ft ³)	_____	_____	[650]

	Sample 29	Sample 30	
EQUIVALENT THICKNESS (T_e)	Unit 4 _____	_____	
inch (nearest 0.1 inch)	Unit 5 _____	_____	
	Unit 6 _____	_____	
Average Equivalent Thickness (T_e), inch (nearest 0.1 inch)	_____	_____	[660]

Tests performed by _____ Date _____
Tests reported by _____ Title _____
Phone _____ FAX _____ CCRL laboratory number _____